

C L A I M S :

1. A process for preparing a multilayer surface protection coating for reinforced concrete for improving the corrosion protection of reinforced concrete structures or reinforced concrete construction parts which bear a first layer sprayed onto said reinforced concrete, substantially made of zinc, which is connected with the metal armoring of said reinforced concrete in an electrically conductive way and a second layer of a polymeric material is characterized in that:
 - said second layer of low-viscosity polymers is applied to said first layer of zinc in the form of a continuous film; and
 - a surface protection layer is applied on top thereof.
2. The process according to claim 1, characterized in that said first layer of zinc is applied by thermal spraying.
3. The process according to claim 1 and/or 2, characterized in that a zinc alloy is sprayed onto said first layer.
4. The process according to claims 1 to 3, characterized in that said low-viscosity polymer for applying said second layer is selected from the group consisting of polyurethane resins and epoxy resins.
5. The process according to at least one of claims 1 to 4, characterized in that a sealing layer, a crack-bridging layer and/or a wear layer is built as said surface protection layer.
6. The process according to claim 5, characterized in that said sealing layer is made of plastic dispersions based on different polymers.
7. The process according to claim 5, characterized in that said crack-bridging layer is made of elastomeric plastics.

8. The process according to claim 5 and/or 7, characterized in that said crack-bridging layer is reinforced with a glass fiber fabric.
 9. The process according to claim 8, characterized in that said elastomeric plastics material is made of polyurethane, epoxy or technically equivalent polymers.
 10. The process according to at least one of claims 5 to 9, characterized in that said wear layer is made of thermosetting materials.
 11. The process according to claim 10, characterized in that said thermosetting material is an epoxy resin.
- 10 12. The process according to at least one of claims 1 to 11, characterized in that a cover sealing layer is provided.
13. The process according to claim 1 and/or 2, characterized in that the second layer is a cover sealing layer in the case where bitumen welding sheets are used as the surface protection layer.
- 15 14. A multilayer surface protection coating for reinforced concrete for improving the corrosion protection of reinforced concrete structures capable of bearing vehicles or reinforced concrete construction parts by layers present on the surface of said reinforced concrete, obtainable by the process according to at least one of claims 1 to 13.
- 20 15. The multilayer surface protection coating for reinforced concrete for improving the corrosion protection of reinforced concrete structures capable of bearing vehicles or reinforced concrete construction parts according to claim 14, having on its surface a first layer of zinc, a second continuous layer of a polymeric plastic material and a surface protection layer.
- 25 16. The multilayer surface protection coating for reinforced concrete for improving the corrosion protection of reinforced concrete structures capable

of bearing vehicles or reinforced concrete construction parts according to claim 14 and/or 15, characterized in that said surface protection layer is a sealing surface protection layer, a crack-bridging surface protection layer and/or a wear layer.

- 5 17. The multilayer surface protection coating for reinforced concrete for improving the corrosion protection of reinforced concrete structures capable of bearing vehicles or reinforced concrete construction parts according to at least one of claims 14 to 16, characterized in that a cover seal is provided on said surface protection layer.